

Applicants: McBean et al.  
Serial No.: 10/718,913  
Examiner: Michael A. Brown  
Art Unit: 3764

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## **REMARKS**

Claims 1-20 are currently pending in this application with claims 1, 9 and 11 being independent claims. Claims 11-20 were allowed and claim 10 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicants have herein amended claims 1, 2, 3, 4, 6 and 9 and cancelled claims 7 and 8. Support for the amendments is found throughout the specification. No new matter has been added. In light of the arguments and amendments made herein, claim 10 has not been rewritten in independent form since the base claim, claim 9, is believed to be allowable.

### **35 U.S.C. § 103 Rejections**

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,821,259 issued to Rahman et al. ("Rahman") in view of U.S. Patent No. 5,853,005 issued to Scanlon ("Scanlon") along with U.S. Patent No. 5,112,296 issued to Beard et al. ("Beard"). Claim 1 has been amended to include a processor, wherein the processor causes the actuator to provide a force to the brace in a first direction having a magnitude which is proportional to a magnitude of the sensor signal and in a second direction a spring return force. Claim 1 is patentable over Rahman, Scanlon and Beard, because none of these references, either alone or in combination, shows or suggests a sensor sensing an electromyographic signal and a processor causing an actuator to provide, to a brace, a force that is asymmetrical, specifically, in a first direction having a magnitude which is proportional to a magnitude of the sensor signal and in a second direction a spring return force.

Rahman discloses an orthosis device having two limb sections pivotably attached, with each limb section including a four-bar linkage and a spring member adapted to provide an equilibrium-inducing force. The orthosis device may additionally include powered actuators and force sensors.<sup>1</sup> Rahman discloses that the force sensors and power actuators may accommodate individuals with muscular degeneration by having the force sensors detect the intention of the user to move and send a signal to the powered actuators to complete the movement.

The Examiner has argued that driving an actuator in a manner that is proportional to a

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<sup>1</sup> Representations to the contrary by predecessor counsel are hereby withdrawn and corrected.

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magnitude of a sensor signal is an “intended use that the prior art is capable of performing.” Office action dated January 9, 2006 at 5. This argument falls short of the mark because “capable of performing” is not a basis for a rejection under 35 U.S.C. § 103(a). Moreover, the claim as now worded requires asymmetrical forces “in a first direction having a magnitude which is proportional to a magnitude of the sensor signal and in a second direction a spring return force.” Nothing in the art of record, either alone or in combination, teaches or suggests such an asymmetrical pattern. Accordingly, amended claim 1 and all claims depending therefrom should be allowed.

Claims 2-5, 7 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rahman in view of Scanlon along with Beard and further in view of U.S. Patent No. 5,888,212 issued to Petrofsky et al. (“Petrofsky”). Claim 7 has been cancelled. Claims 2-5 depend directly or indirectly from independent claim 1 and thus contain all of its limitations. Therefore, these dependent claims are patentable over Rahman, Scanlon and Beard for at least the same reasons set forth above with respect to claim 1. Claim 9 has been amended to include a processor, wherein the processor causes the actuator to provide a force to the brace in a first direction having a magnitude which is proportional to a magnitude of the sensor signal and in a second direction a spring return force. Claim 9 is similar to claim 1, but additionally includes a control means coupled to the processor to aid the actuator. For the reasons stated above with respect to amended claim 1, Rahman, Scanlon and Beard do not disclose, teach or suggest the subject matter of claim 9. Neither does Petrofsky.

Petrofsky is directed to a computer controlled hydraulic resistance device having an hydraulic actuator and a solenoid actuated valve connected to control the flow of hydraulic fluid to and from the hydraulic actuator which applies resistance to the apparatus through a coupling. The device senses the position of the apparatus and feedsback to a micro-controller for applying a resistance profile to the apparatus. Claim 9 is patentable over Rahman, Scanlon, Beard and Petrofsky, because none of these references, either alone or in combination, shows or suggests a sensor sensing an electromyographic signal and a processor causing an actuator to provide, to a brace, a force that is asymmetrical, the force in a first direction having a magnitude which is proportional to a magnitude of the sensor signal and in a second direction a spring return force.

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Thus, the subject matter of claim 9 is not rendered obvious by Rahman in view of Scanlon along with Beard, in further view of Petrofsky.

Claims 6 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rahman in view of Scanlon along with Beard, further in view of Petrofsky and further in view of U.S. Patent No. 6,969,365 issued to Scorvo ("Scorvo"). Claim 8 has been cancelled. Claim 6 depends from independent claim 1 and thus contains all of its limitations. Therefore, claim 6 is patentable over Rahman, Scanlon, Beard, Petrofsky and Scanlon for at least the same reasons set forth above with respect to claim 1.

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## **CONCLUSION**

A Request for Continued Examination is enclosed along with the required fee of \$395.00 as set forth in 37 C.F.R. §1.17(e). Also, an Information Disclosure Statement and form PTO-1449 are enclosed. Please apply any additional charges or credits to Deposit Account No. 19-4972.

All the claim rejections have been addressed and all of the pending claims are allowable for the reasons stated and others. Reconsideration of the application and issuance of a notice of allowance are respectfully requested.

Respectfully submitted,

  
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